



Intranet Quorum[®] 3

Architecture Overview

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Introduction

Intended Audience

This document is intended for network and computer professionals involved in the maintenance, configuration and support of the Intranet Quorum[®] product (IQ). Typically, this document will be used to facilitate decisions about IQ deployment.

Scope

The purpose of this document is to provide an overview of the following:

- How configuration decisions interrelate;
- How servers and clients are used by the IQ application;
- How overall configuration decisions effect the configuration of individual system components.

Servers are discussed in terms of their role in the application environment, rather than as specific nodes within the network. Multiple types of configurations are available where multiple nodes work together to fill a particular role or where a single node may function in multiple roles in relation to IQ. Examples are given to clarify when and why a particular scenario is recommended.

This document is not intended as an installation guide or instruction set. Engineers can use this document in order to understand requirements for establishing test environments. However, the detailed instructions for specific releases and information specific to a particular deployment should first be obtained by contacting your IT Consultant (ITC).

Network policies, security requirements and user requirements can all impact configuration decisions. Requirements specific to your environment should be discussed with your ITC.

The information in this document pertains to configuration options for IQ 3.x.



What is Intranet Quorum?

Intranet Quorum[®] (IQ) is a Citizen Relationship Management and Workflow system used by government officials to facilitate and track interaction with key constituencies. IQ is:

- **Web-based**, offering the centralized control, ease of deployment and supportability inherent in all web-driven applications;
- **Database-driven**, preserving the complex interconnections between different types of data required to effectively track government workflows;
- **Thin Client**, client interface based on standard tools requires minimal configuration and support;
- **Extensible**, able to be configured in a variety of network and server configurations to match the specific needs of each customer.

Modules

The IQ application is made up of a series of specialized modules. Data from these modules is stored in a central database and is cross-linked in order to reflect accurately the complex interrelationship inherent in standard government processes. Links to modules are only displayed for users who have been granted access.

Types of IQ modules include:

- **Standard modules**, available in every deployment;
- **Specialty modules**, designed to meet specific needs common to many but not all environments. These are fully developed modules with specific functions that may or may not be needed in a particular environment. Specialty modules are usually selected during the sales process in order to be activated and configured as part of the initial IQ deployment;
- **Custom modules**, designed to meet needs unique to a specific environment or user base. Custom modules require a significant level of input and interaction between Lockheed Martin Information Technology development staff and key stakeholders. These modules may be developed and tested on a timeline for the initial IQ deployment, but are most often developed as a subsequent phase in the adoption cycle.



Standard Modules

People	Records name, addresses and other information on all contacts made through IQ. People records will include agency contacts tracked for Workflow and constituent or other people records used for correspondence.
Mail	Allows creation and tracking of correspondence generated to People records in the IQ database. Mail records can be created directly from a People record, from Workflow and from other modules in IQ.
Workflow	Allows tracking of complex or multi-part projects. Templates are created to include processes completed within the office where all participants are users on the same IQ account, or Extended Workflow where part of the process is sent from IQ to an outside contact for completion. Standard Workflow is a core function available in all IQ deployments. Extended Workflow requires additional setup and system configuration.
Documents	Acts as the document library for form letters, formats and other documents used with Mail, Workflow and other IQ modules. Allows standard Document tracking functionality for other types of documents used within an office.
Calendar	Scheduling package designed for multiple levels of user access. Schedule items can be associated with People records and can be used as part of a Workflow. Allows calendar items to be sorted by the nature of the event, issues and People affiliated with the event.
Admin	Used to create a manage users, groups and security profiles. Also used to set system configuration settings and access the IQ Admin Client.



Web Server Configuration

The web server provides application access to IQ through a web interface. The function of the web server may be filled by a single node or by a multi-node web farm. Configuration requirements include:

- Microsoft Windows 2003 or 2000 operating system;
- .NET Framework 1.1 with Service Pack 1;
- IIS[®] 6;
- TCP/IP protocol with port access to web services;
- SMTP Service (required for some IQ modules);
- Internet Explorer[®] 6.0 Service Pack 1;
- Latest approved operating system service pack and security rollup;
- Microsoft Data Access Components (MDAC) configured to connect to the Oracle database;
- Oracle SQL*Net Client;
- IQ Application Files;
- Auditing of connections, files and registry (recommended, not required);
- ASPNet State Session service (recommended in large environments, but not required).



IIS Configuration

LMDSI recommends servers used with IQ be dedicated for that purpose and not shared with other applications. Assuming this is true for the web server, all virtual directories and applications installed automatically with the IIS[®] installation should be removed, leaving only the virtual directory for IQ. FTP Services and Microsoft Front Page[®], which can pose security risks, are not required and should be removed.

IQ requires a directory for the web site where IQ and Mailroot folders reside. The default location is E:\INETPUB.

Default Web Site

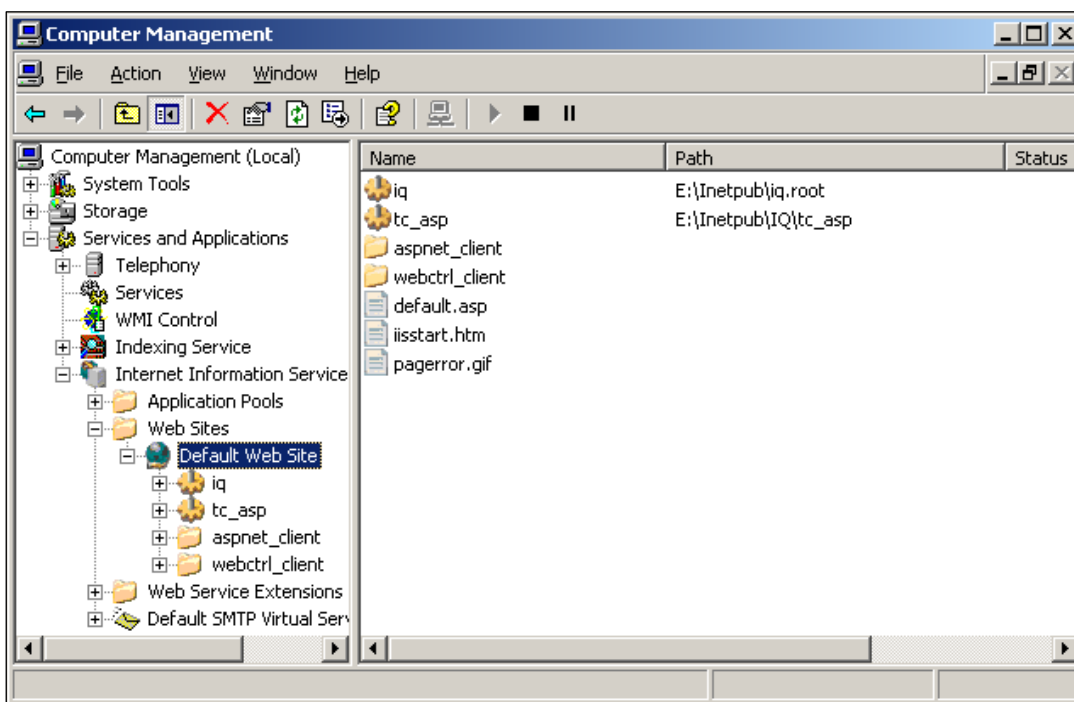


Figure 1 -- The Default Web Site is accessed from Internet Service Manager.

Root Directory

IQ is configured as a subdirectory of the default web site. The URL used to access IQ is <http://<servername>:800/IQ>, where the name of the IQ web server is used in place of the <servername> placeholder.

The default location of the IQ application directory is E:\INETPUB\IQ.ROOT. IQ users are directed to myworkhome.asp automatically if Single-Signon is configured.

The default directory for IQ Admin client is E:\INETPUB\IQ.

The GLOBAL.ASA file is the Windows default and is not specific to IQ.



TCP Port

IQ does not require a specific TCP port. Any available port can be used. The port selected should be determined by the network administrator based on availability and security requirements. For security reasons, LMDSI does not recommend using the default, port 80.

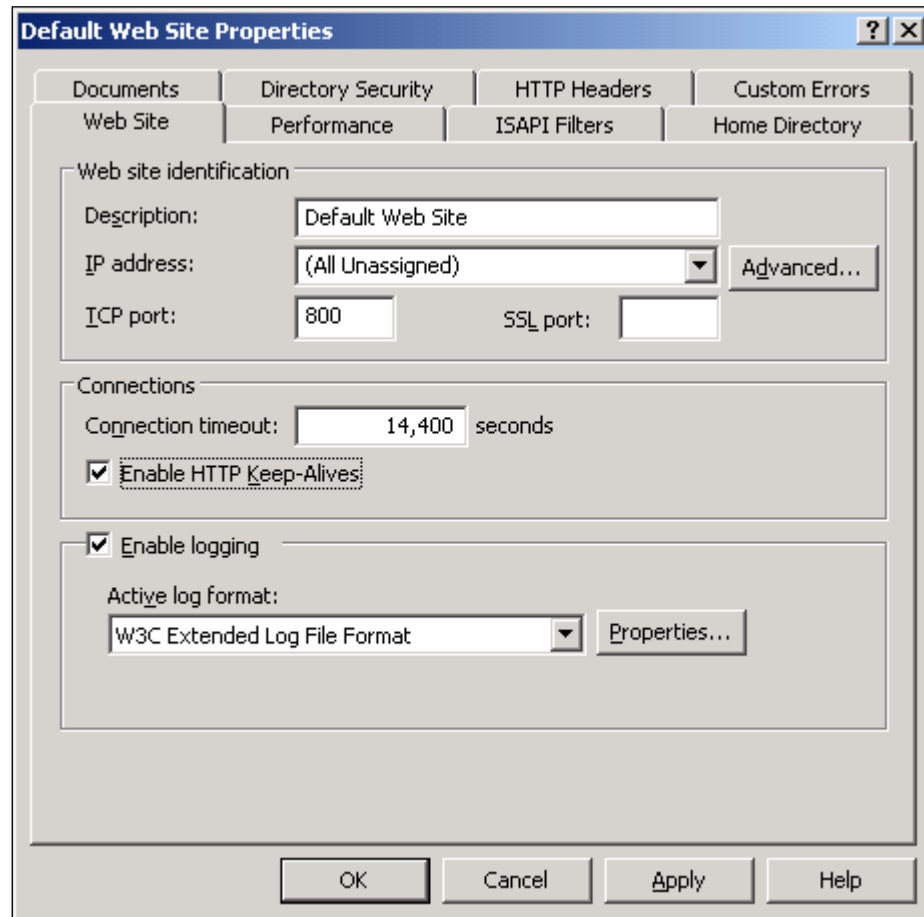


Figure 2 - TCP Port settings are adjusted from the Web Site tab of the Default Web Site Properties window.

Connection Timeout

Typically all timeout settings are set to four hours for IQ. Connection Timeout for the Home Directory should be set to 14400 seconds.



Application Configuration

Application Mapping

IQ requires only the .ASP and .NET Framework application mapping. The .ASA mapping should be left in place because removing it can interfere with the normal operation of IIS.

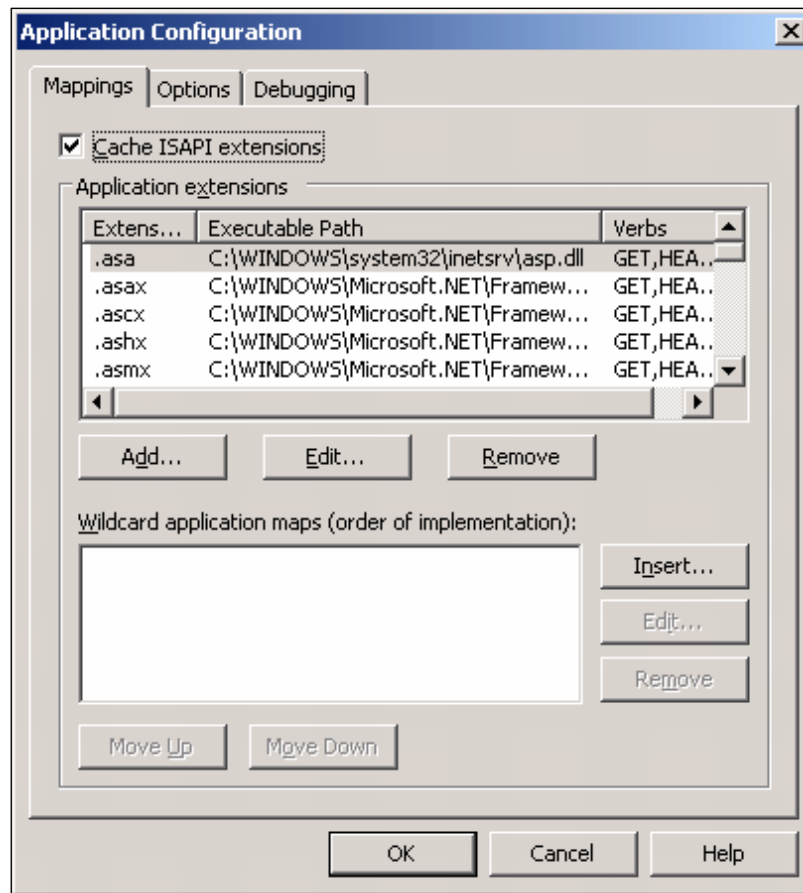


Figure 3 - The Application Configuration window is accessed from the Home Directory tab in the Default Web Site Properties window.



Application Options

Session timeout and *ASP Script timeout* settings are increased to allow adequate time for larger queries to run. As stated above, the standard timeout setting is 4 hours. Values should be set as shown in the figure below.

Enable buffering is left on by default, but can be changed to improve performance if required by the local network environment.

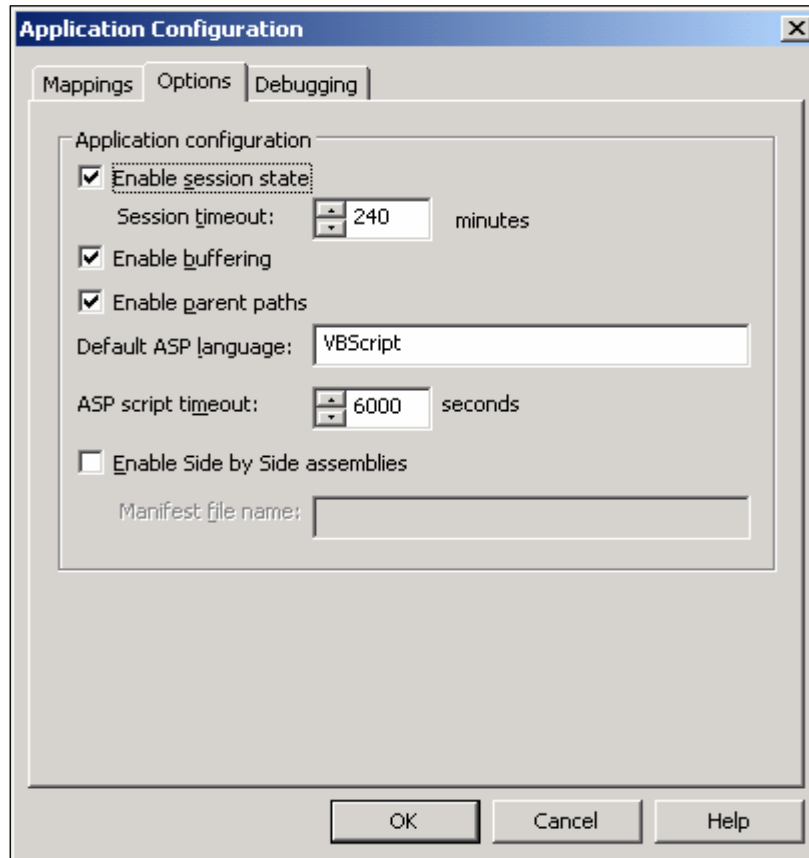


Figure 4 - The App Options tab is accessed from the Home Directory tab in the Default Web Site Properties window.



Directory Security

Authentication Methods

By default, IQ uses NT authentication.

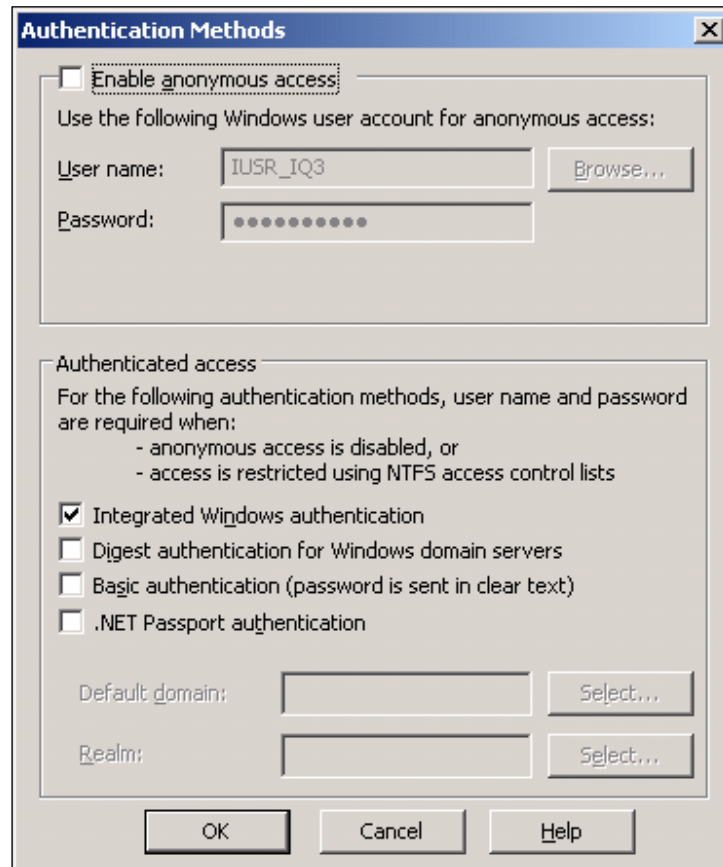


Figure 5 – Authentication Methods are set from the Directory Security Tab in the Default Web Site Properties window.

IQ user ID and password information must match the network user ID and password for pass-through authentication. If a matching IQ user is not found or if passwords do not match, users will be prompted for IQ logon information.



Background Jobs Directory

The ASP folder is used for background job management. By default, this folder is F:\ASP for the three-drive node operating as the web server in a multiple-server environment, or E:\ASP for a node configured with two-drives.

SMTP Server Configuration

IQ uses the SMTP service of IIS[®] for incoming IMA messages and outbound e-mail in the Mail and Workflow modules. Typically, IQ uses the default SMTP virtual server and domain. The SMTP properties are configured so that IQ relays outgoing mail to an existing smart host, rather than relaying messages directly. LMDSI recommends that inbound mail to IQ be routed through an existing, externally facing SMTP server in order to protect IQ from potential e-mail attacks.

The SMTP server integrated with IIS is a very basic mail server designed primarily as a mail forwarder. As such, more advanced features such as spam detection, rules or redirection are not available, as they are in more robust SMTP servers. Using a full-featured mail server as an intermediary allows more robust configuration of how messages are routed and how automatic responses are sent.

Regardless of the smart host and e-mail system used, SMTP servers relaying mail to IQ must preserve the sender's From address. If the From address is omitted or changed by the forwarding server, IQ will be unable to accurately send electronic replies.



Component Services

Application Pool Properties

IQ 3.0 runs in its own application pool. The timeout property is set to 240 minutes (4 hours).

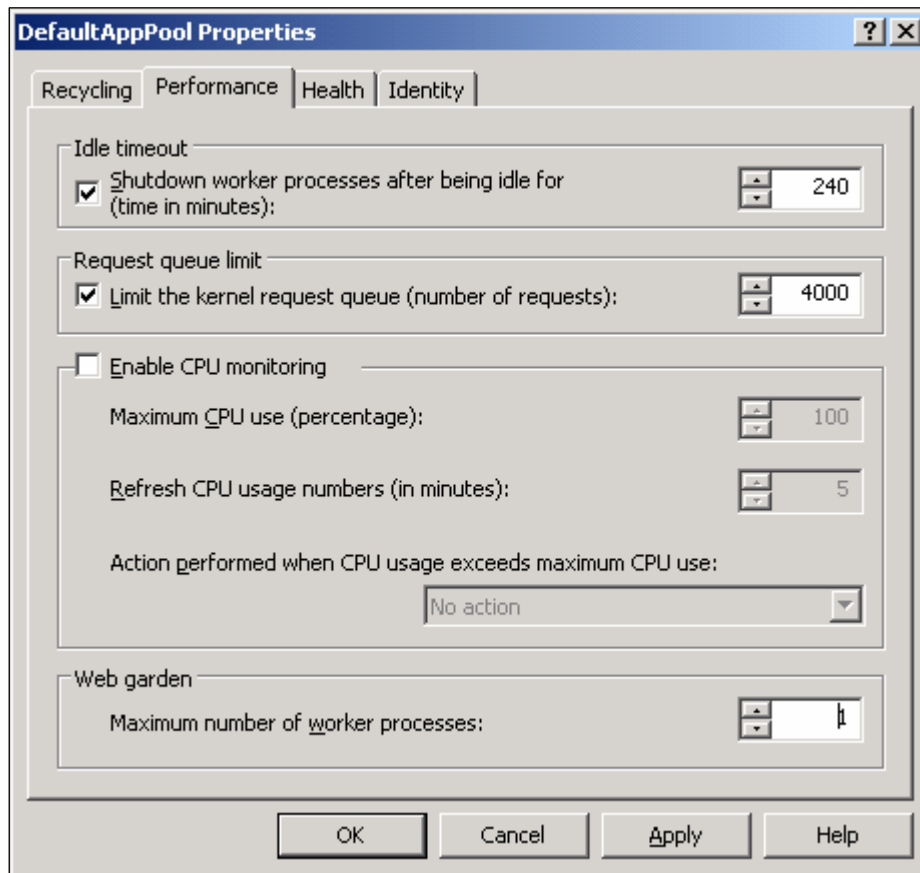


Figure 7 – The worker timeout setting is accessed from the Properties tab of the Application Pool settings in the IIS Manager module of Computer Manager.

ASPNET User

The ASPNET is the user created by and used for the .NET framework. This user must exist and the password cannot be changed from the encrypted value automatically created.



Oracle SQLNet Client Configuration

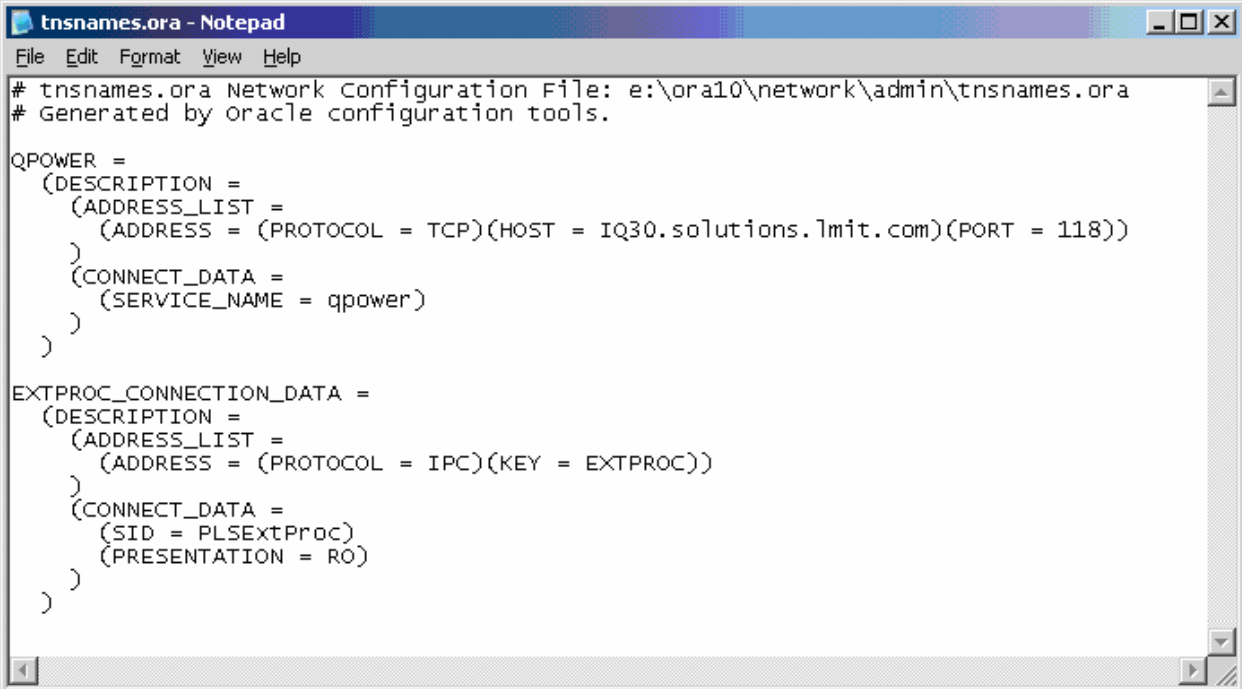
SQLNET Version

IQ can use SQLNET version 8.1.7 or higher.

TNSNAMES.ORA

IQ requires the Oracle middleware to be configured for SQL communication between the IQ Oracle instance and the web application. The TNSNAMES.ORA file defines the parameters for this communication. This file defines the address and port of the Oracle Listener for the IQ database. In a single server configuration or when the web server is configured with three drives, this file is typically located in the E:\Ora10\Network\Admin directory. For a web server with two drives, this file is typically located in the C:\Ora10\Network\Admin directory.

A Sample TNSNAMES.ORA file is seen below:



```
# tnsnames.ora Network Configuration File: e:\ora10\network\admin\tnsnames.ora
# Generated by oracle configuration tools.

QPOWER =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = IQ30.solutions.lmit.com)(PORT = 118))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = qpower)
    )
  )

EXTPROC_CONNECTION_DATA =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = IPC)(KEY = EXTPROC))
    )
    (CONNECT_DATA =
      (SID = PLSExtProc)
      (PRESENTATION = RO)
    )
  )
```

Figure 8 - The TNSNAMES.ORA file is used to define communication between the IQ application and the IQ Oracle instance.

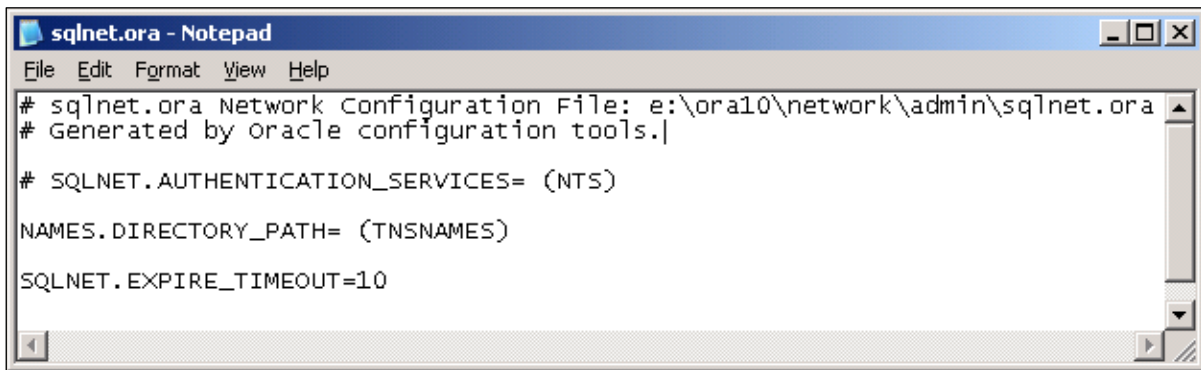
The host value in the TNSNAMES.ORA file can be either the host name or the host IP. The port value should be determined by the network administrator based on availability and security requirements. It can be any available TCP port, but it must match the port defined for the Oracle listener configured for the database server.



SQLNET.ORA

In a single server configuration or when the web server is configured with three drives, this file is located in the \Network\Admin folder of the Oracle home directory of the web server. For a single-node web server with three drives, typically this will typically be E:\Ora10\Network\Admin. For a web server with two drives, this is typically C:\Ora10\Network\Admin directory.

This configuration file sets connection parameters between IQ and Oracle. Expire_Timeout will ensure no unused connections remain open.



```
# sqlnet.ora Network Configuration File: e:\ora10\network\admin\sqlnet.ora
# Generated by Oracle configuration tools.

# SQLNET.AUTHENTICATION_SERVICES= (NTS)

NAMES.DIRECTORY_PATH= (TNSNAMES)

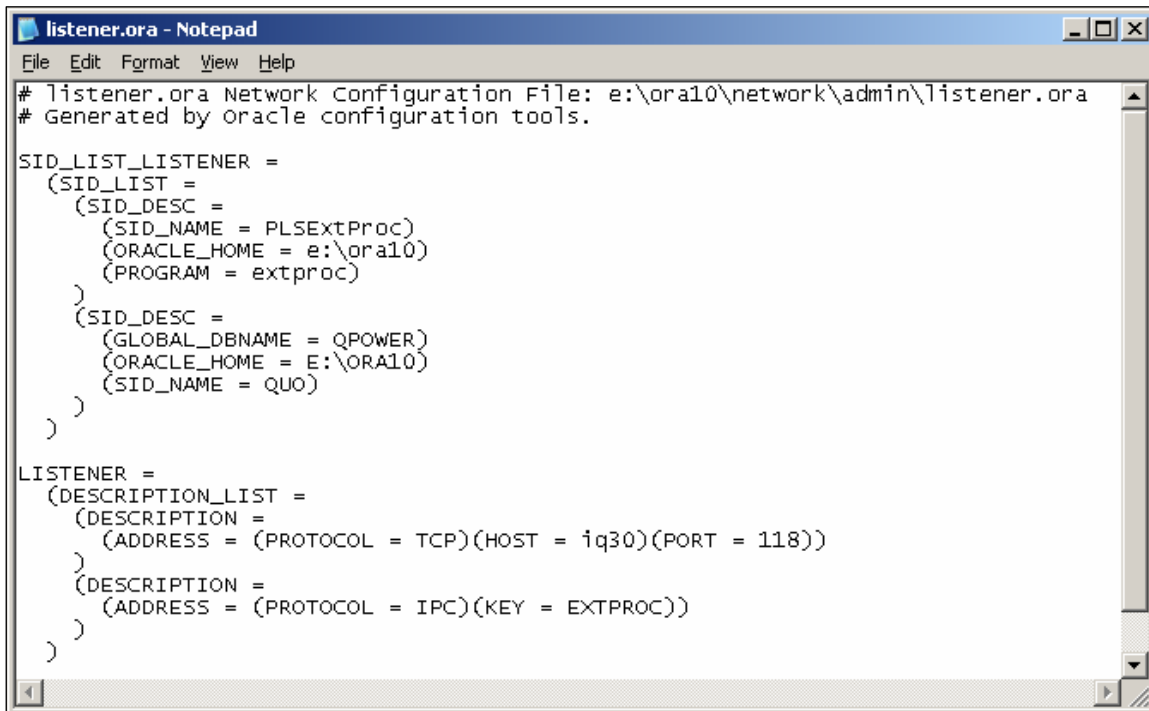
SQLNET.EXPIRE_TIMEOUT=10
```

Figure 9 – Sample SQLNet.ORA file.



LISTENER.ORA

The listener.ora file defines the location of oracle communication. In a single server configuration or when the web server is configured with three drives, this file is typically located in the E:\Ora10\Network\Admin directory. For a web server with two drives, this file is typically located in the C:\Ora10\Network\Admin directory.



```
# listener.ora Network Configuration File: e:\ora10\network\admin\listener.ora
# Generated by oracle configuration tools.

SID_LIST_LISTENER =
  (SID_LIST =
    (SID_DESC =
      (SID_NAME = PLSExtProc)
      (ORACLE_HOME = e:\ora10)
      (PROGRAM = extproc)
    )
    (SID_DESC =
      (GLOBAL_DBNAME = QPOWER)
      (ORACLE_HOME = E:\ORA10)
      (SID_NAME = QUO)
    )
  )
)

LISTENER =
  (DESCRIPTION_LIST =
    (DESCRIPTION =
      (ADDRESS = (PROTOCOL = TCP)(HOST = iq30)(PORT = 118))
    )
    (DESCRIPTION =
      (ADDRESS = (PROTOCOL = IPC)(KEY = EXTPROC))
    )
  )
)
```

Figure 10 – Sample Listener.ORA file.

Required Services

IQ requires up to three services on the web server:

IQ Scheduler

The background schedule process that executes scripts for processing incoming IMA messages, background jobs. This service is required for all IQ deployments.

ASPNet State Session –

The session state service manages user session information on the IQ web server. This service is recommended for large environments, but not required.

IQPop

The Pull process used to transfer incoming IMA messages from a pop3 mail server into the drop folder. This service is required only when the getmail version of IMA Pull is being used.

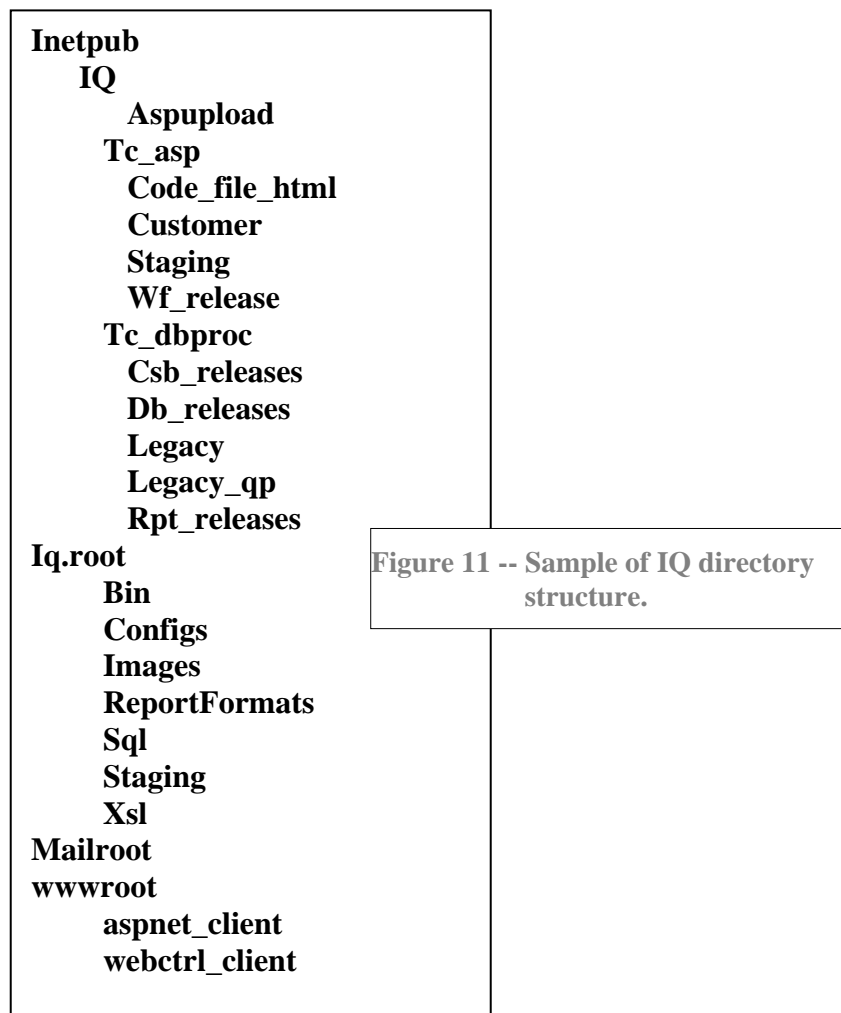


Directory Structure and IQ Application Files

IQ files are deployed to subdirectories of the web site folder, typically E:\INETPUB\. The main IQ directories are:

- IQ.ROOT, the IQ 3.0 application folder;
- IQ, which includes the \TC_ASP and \TC_DBPROC subdirectories used for Admin Client.

A partial sample of the directory structure is given below:





Backup Requirements

LMDSI recommends that all nodes in an IQ environment be backed up routinely. The backup scheme in each environment may vary, depending on configuration, data access requirements and backup media. Backups will generally be the responsibility of the network or system administrator.

LMDSI can provide recommendations and tools appropriate for IQ. Questions or concerns about backup requirements for specific installations should be raised prior to installation.

For the IQ web server, backups should include a full backup of the drive that houses IQ application files. This is especially important in environments where customized modules have been developed and deployed. Because custom modules are not part of standard IQ releases, restoring or rebuilding a web server with customized software without a recent, valid backup can cause unnecessary delays.



Database Server

The database server stores all IQ data for retrieval and manipulation through the web interface. The database can run on a Windows 2003 or 2000, or UNIX node. Access to information in the database is controlled through the Oracle client connection between web server and database server.

Oracle Configuration

IQ 3.0 runs on Oracle 10, and can be run in Archive mode or using Oracle Replication. The standard configuration is discussed here. Contact your ITC for specific information on other configuration options. Releases and patches are certified as they are available and tested with IQ.

Required Components

The following Oracle modules listed below reflect the installed requirements for the IQ database server:

- Oracle10g 10.1.0.3.0;
- Oracle Net Services 10.1.0.3.0;
- Oracle Enterprise Manager Products 10.1.0.3.0;
- Oracle Universal Installer 10.1;
- Oracle10g Windows Documentation 10.1.0.3.0;
- Enterprise Manager Console 10.1.0.3.0;
- Oracle Net Listener 10.1.0.3.0;
- Oracle ODP Provider for .NET 10.1.0.3.0;
- SQLPlus 10.1.0.3.0.



Oracle Listener

An Oracle Listener service must be configured for the database server. The Listener configured by LMDSI will be configured with a Session Identifier (SID) of *QUO* and a GLOBAL_DBNAME of *QPOWER*. These values are set in the LISTENER.ORA file located by in the \Network\Admin folder of the Oracle home directory. The default location of is E:\Ora10\Network\Admin.

A sample LISTENER.ORA file for IQ is shown below:

The port setting should be determined by the network administrator based on availability and security requirements. It can be any available TCP port, but must match the port defined in the TNSNAMES.ORA file discussed previously in the Web Server section.

```
# listener.ora Network Configuration File: e:\ora10\network\admin\listener.ora
# Generated by oracle configuration tools.

SID_LIST_LISTENER =
  (SID_LIST =
    (SID_DESC =
      (SID_NAME = PLSExtProc)
      (ORACLE_HOME = e:\ora10)
      (PROGRAM = extproc)
    )
    (SID_DESC =
      (GLOBAL_DBNAME = QPOWER)
      (ORACLE_HOME = E:\ORA10)
      (SID_NAME = QUO)
    )
  )

LISTENER =
  (DESCRIPTION_LIST =
    (DESCRIPTION =
      (ADDRESS = (PROTOCOL = TCP)(HOST = iq30)(PORT = 118))
    )
    (DESCRIPTION =
      (ADDRESS = (PROTOCOL = IPC)(KEY = EXTPROC))
    )
  )
```

Figure 13 – The LISTENER.ORA file defines parameters used by the Oracle Listener. The content of the file used by the database server and the IQ web server should be identical when separate files are used.



Oracle Instance for IQ

INIT File Parameters

Parameters relating to the System Global Area and Memory Pools are defined in the Oracle INIT file, located the \Admin\qppower\pfile folder of the Oracle home directory. By default this file is located in E:\Oracle10\Admin\qppower\pfile. These parameters will vary for each implementation, as determined by the unique needs of the environment. Parameters that must be included for IQ are as follows:

- DB Name;
- Instance Name;
- Service Names;
- DB Block Size;
- Job Queue Processes.



Sections of a sample INIT file are shown below:

```
# Copyright (c) 1991, 2001, 2002 by Oracle Corporation
# Cache and I/O
#####
db_block_size=8192
db_cache_size=25165824
db_file_multiblock_read_count=32
disk_asynch_io=FALSE
DBWR_IO_SLAVES=8
# Cursors and Library Cache
#####
open_cursors=500
cursor_sharing=TRUE
session_cached_cursors=100
log_buffer=2048000
# Database Identification
#####
db_domain=""
db_name=qpower
# Diagnostics and Statistics
#####
background_dump_dest=E:\ORA10\ADMIN\QPOWER\BDUMP
core_dump_dest=E:\ORA10\ADMIN\QPOWER\CDUMP
user_dump_dest=E:\ORA10\ADMIN\QPOWER\UDUMP
# File Configuration
#####
control_files=('E:\ORA10\DBS\QUO\CONTROL01.CTL', 'F:\DBS\QUO\CONTROL02.CTL',
'F:\DBS\QUO\CONTROL03.CTL')
db_recovery_file_dest=e:\ora10\dfs\quo\flash_recovery_area
db_recovery_file_dest_size=21483648
# Job Queues
#####
job_queue_processes=10
# Miscellaneous
#####
compatible=10.1.0.2.0
# Optimizer
#####
optimizer_index_cost_adj=25
# Pools
#####
java_pool_size=20971520
large_pool_size=8388608
shared_pool_size=83886080
# Processes and Sessions
#####
processes=300
sessions=170
# Security and Auditing
#####
remote_login_passwordfile=NONE
# Sort, Hash Joins, Bitmap Indexes
#####
sort_area_size=65536
# System Managed Undo and Rollback Segments
#####
undo_management=AUTO
undo_tablespace=UNDOTBS1
```

Figure 14 - Sample sections of Oracle INIT file. Bold entries must be included for IQ. This sample file is not complete and should be used as reference only.



Required Share

The Oracle home directory, typically E:\Oracle10 for a single node with three drives, must be shared with modify permissions for the ASPNET user created and used by the .NET framework and for IQ users. This is required by the .net application for the program and the client to be able to access the Oracle SQLNet Client files.

Required Service

The OracleDBConsoleQUO service must be installed and running in order to access the Enterprise Management Console, used to maintain the IQ database and analyze tables when IQ releases are performed. The locally run java Enterprise Management Console can be used as an alternative when required by local security policies.

The Enterprise Management Console is accessed using the URL <http://<servername>:5500/EM>, where <servername> is replaced with the actual name of the IQ database server, and 5500 is the default port setting.

Backup Requirements

LMDSI recommends that all components in an IQ environment be backed up routinely. The backup scheme in each environment may vary, depending on configuration, data access requirements and backup media. Backups will generally be the responsibility of the network or system administrator.

LMDSI can provide recommendations and tools appropriate for IQ. Questions or concerns about backup requirements should be raised prior to installation.

At a minimum, a complete export of the database should be performed and backed up nightly, with a full backup of the database at least once per week. Because the data stored in the database is unique to each user population, there is no way to restore Oracle data without a valid and current copy of the data. LMDSI cannot be responsible for reentry or recreation of lost data due to inadequate backups.

LMDSI recommends a full backup of the Oracle database at least once per week. While the database structure can be recreated in most cases, having to do so because of an inadequate or outdated backup of the full Oracle database can be costly and can cause unnecessary downtime.



Client

Types of IQ Clients

Standard Clients

The standard client configuration allows users to input and update records, create and print IQ documents, perform other standard functions. The standard client configuration is the minimum required to operate as a functional IQ client.

Scanner Clients

The scanner client configuration allows users all the function of the standard client and the additional ability to scan images used with IQ. OCR can be used to create text content from scanned documents, which can be searched within IQ. Scanning is most often used with Workflow, but can be used with other IQ modules as well.

Standard Client Requirements

The standard client configuration allows users to input and update database records, create and print correspondence, and perform other standard IQ functions. The specific level of access for each user will be determined by permissions granted to that user.

The standard client configuration required will vary depending on the application configuration selected. This section outlines requirements common across configurations followed by an explanation of environment-specific client roles and requirements.

Hardware Requirements

Exact hardware requirements will be determined by the operating system and other software loaded on the client workstation. Standard IQ clients have no special requirement beyond the requirements of Windows and IE. LMDSI recommends the following as a minimum:

Windows 2000/Windows XP clients:

- 256 MB RAM;
- 1 GHz Pentium III CPU;
- 10GB hard drive.

Scanning clients will have additional requirements and are discussed below.



Operating System and Browser Requirements

IQ clients require a Windows-based operating system, either Windows 2000 or Windows XP. Current versions of IQ operate with IE version 6.0 and later.

Browser Configuration Requirements

Minimal configuration is required within IE. These setting should be applied regardless of the IE version in use.

IE General Settings

Browser should be set to check for new content automatically.

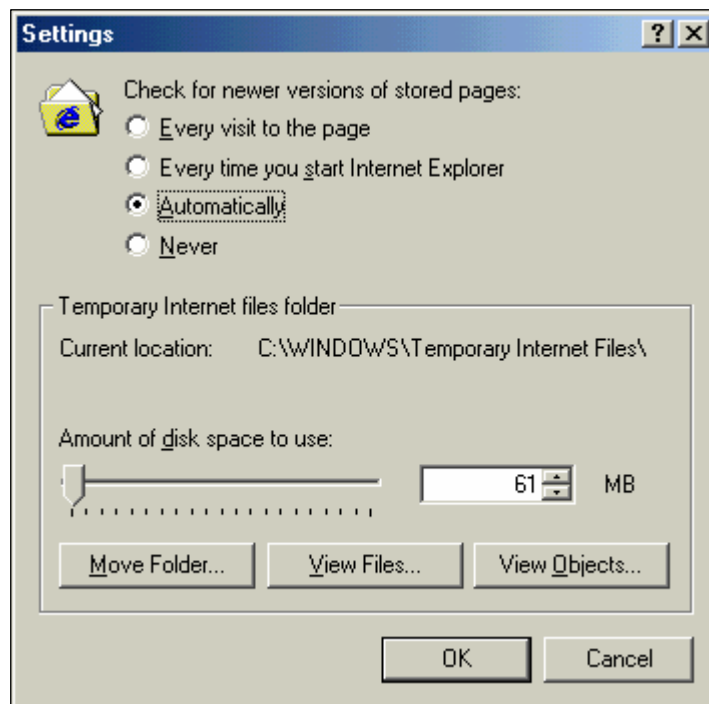


Figure 15 - The Settings window is accessed using the Settings button on the General tab of the Internet Options window.



IE Security Settings

Zone Setting

IQ can run successfully for clients set with it to run in any zone – Internet, Local Intranet or as a Trusted site. The Local Intranet zone is commonly used. The most secure environment is with IQ running as a trusted site.

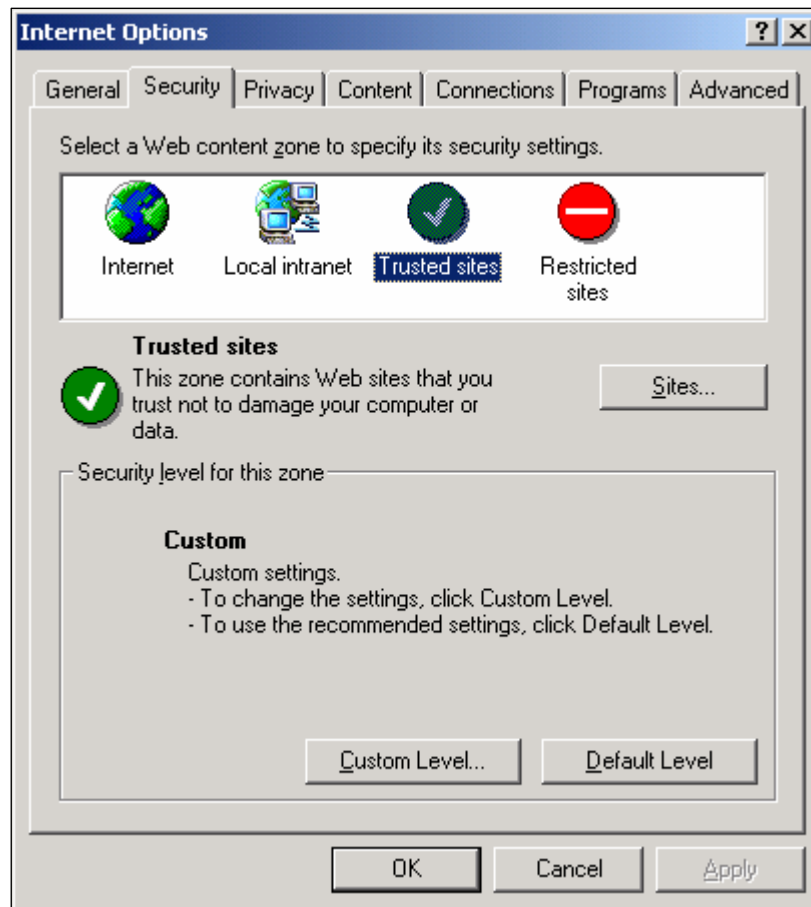


Figure 16 - Zone Settings are configured in the Internet Options window.



ActiveX Requirements

ActiveX settings for the zone used to access IQ will need to be set as outlined below. These mirror the default IE settings for the Internet zone.

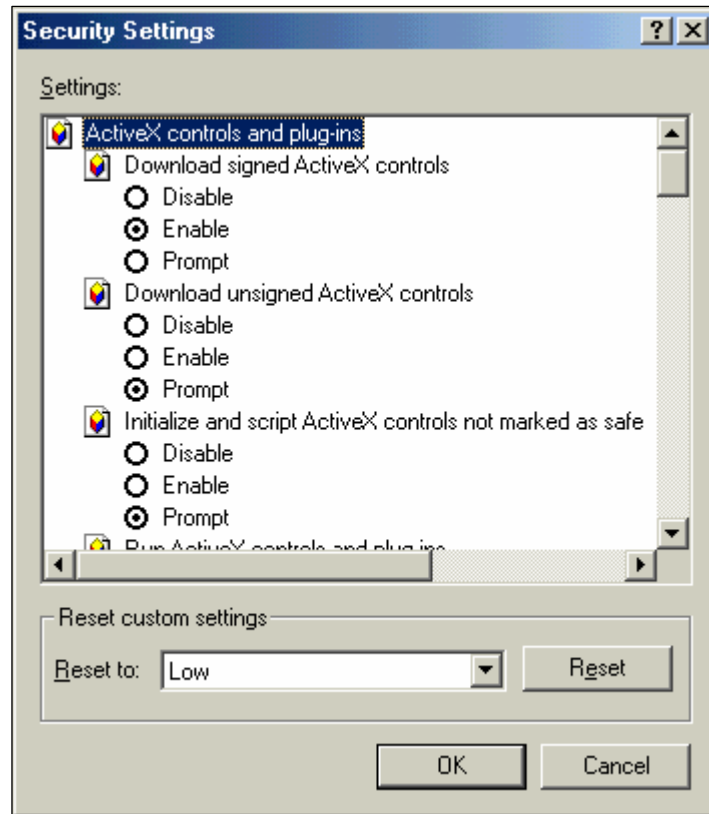


Figure 17 - The Security Settings window is accessed from the Security tab of the Internet Options window.

IQ can operate successfully in environments where these settings are predetermined and cannot be modified by the user, or in environments where users maintain the ability to modify IE settings. The IQ software has no specific requirement for how the settings are made or maintained.

Download signed ActiveX controls

Set to *Enable*.

Download unsigned ActiveX controls

Set to *Enable* or *Prompt*. The OCX control IQ uses for images is allowed to both read and write files, and consequently cannot be considered safe in an anonymous access environment. *Enable* is the most commonly used setting and minimizes user intervention.



Initialize and script ActiveX controls not marked as safe

Set to *Enable* or *Prompt*. *Enable* is the most commonly used setting and minimizes user intervention.

Run ActiveX controls and plug-ins

Set to *Enable*.

Script ActiveX controls marked as safe for scripting

Set to *Enable*.

Active Scripting Requirement

Scripting settings for the zone used to access IQ will need to be enabled. This mirrors the default IE settings for the Internet zone.

Active Scripting

Set to *Enable*. If disabled, this setting can override the Active X settings detailed above.



IE Advanced Settings

Advanced settings in IE determine how the application behaves in a variety of circumstances. The settings below include both required and recommended settings.

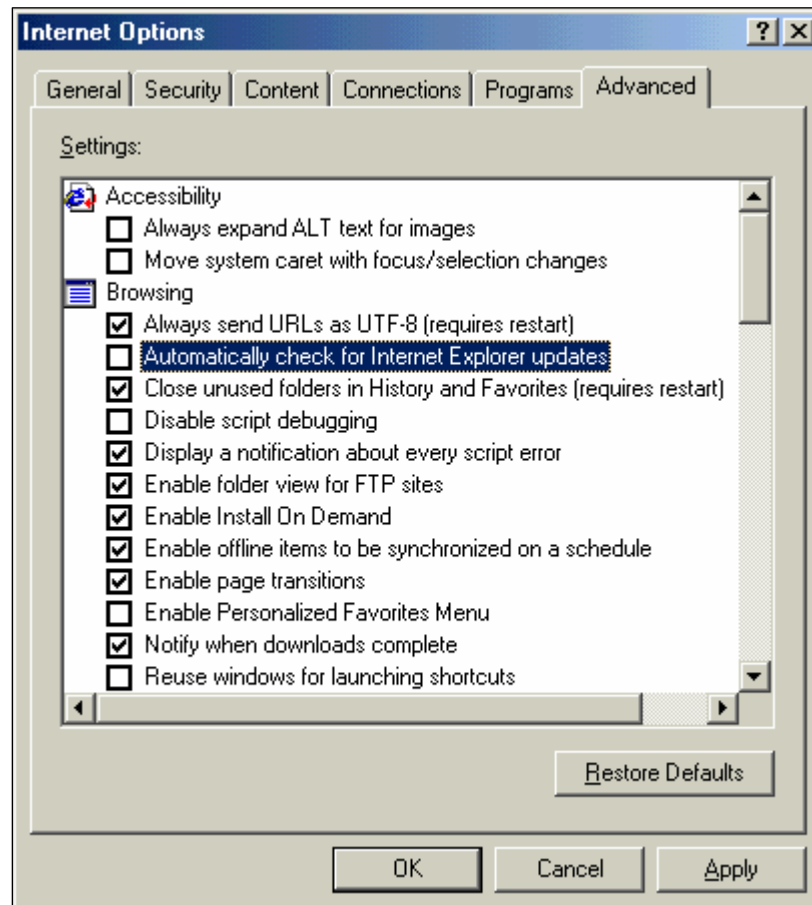


Figure 18 - Advanced settings are configured from the Advanced tab in the Internet Options window.

Automatically check for Internet Explorer updates

LMDSI recommends updates to Internet Explorer® be applied in a planned and uniform manner across the IQ user base. Disabling automatic notification allows IT staff more control over when and how these updates will be applied.

Disable script debugging

LMDSI recommends that debugging be disabled. Debugging can be useful in troubleshooting, but is not required for everyday use of the application.



Display notification about every script error

LMDSI recommends that notification be enabled on all script errors. Alerting the user to errors as they occur allows them to be reported and addressed as quickly as possible.

Reuse windows for launching shortcuts

LMDSI recommends windows not be reused. Though IQ uses separate windows for explorer pages (My IQ, searches and search results) and record pages, specifying that windows not be reused ensures that emailed links to IQ records will not open over active browser sessions.

Use inline AutoComplete

IQ requires AutoComplete be turned off. Because there are so many data entry fields in IQ and because the nature of the data will vary with each record, AutoComplete is not useful and can interfere with IQ.

Empty Temporary Internet Files folder when browser is closed

LMDSI strongly recommends that temporary files be deleted each time the browser is closed. Temporary data stored on the workstation can pose security risks and can unnecessarily use disk space.

Office XP Web Components Tool

The Executive Dashboard pages display gauges of activity in IQ. The Office XP Web Components tool enables users to access this information using Internet Explorer.

Network Access

All IQ clients require a TCP/IP connection to the IQ web server. All user and client access to data in the IQ database is managed through the IQ web server.

Other Requirements

It is common that users print to a shared network printer. IQ also enables users to print to local printer, if available. In either case, the appropriate print drivers will need to be loaded on the client PC.

IQ clients used to export Event Tracking information to Outlook will require Outlook 2000 or higher.



Scanner Client

Additional Hardware requirements

In addition to the standard client hardware requirements, IQ scanner clients require a TWAIN-compliant scanner. The exact scanner selected will determine whether additional hardware, cards or cables are required to connect the scanner to the workstation. Consult the scanner manufacturer's documentation for details.

Additional Software Requirements

Scanning clients are required to run Windows XP with Service Pack 1 or higher.

Microsoft Office 2003 with Microsoft Office Document Imaging (MODI)

Software provided by scanner manufacturer to operate the scanner.

In addition to the core operating system and Office-level tools, two additional components are installed automatically on client workstations when the IQ scanning interface is access for the first time:

- The WIA Automation 2.0 API (wiaAut.dll); and
- DynamicWebTwainCtrl.dll, a Twain scanner interface from DynamSoft corporation.

The Active X settings outlined below enable the installation of these components.



Additional Software Configuration

IE Security Settings

Two ActiveX settings will need to be updated on the scanner client as outlined below.

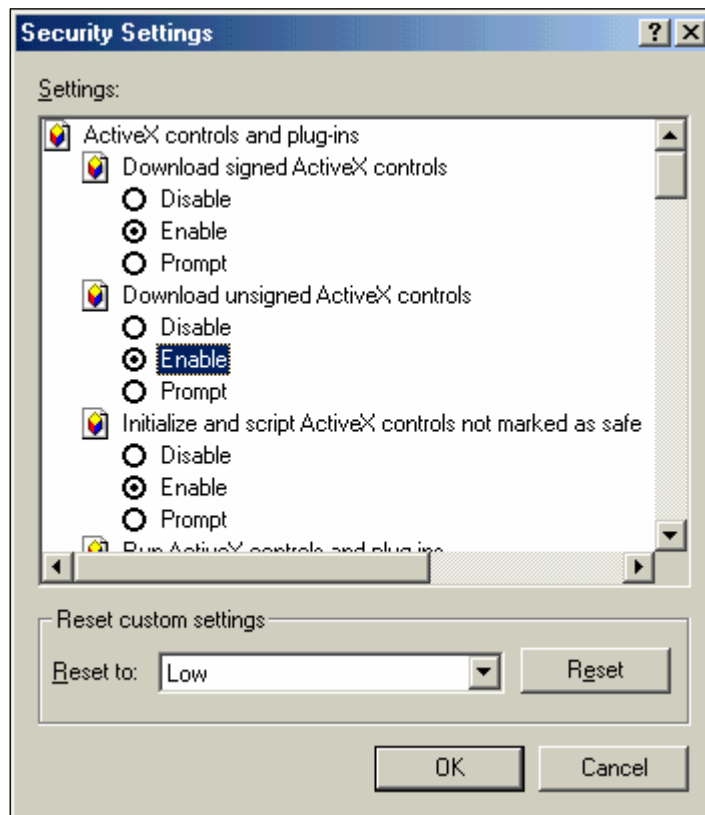


Figure 19 - The Security Settings window is accessed from the Security tab of the Internet Options window.

Download unsigned ActiveX controls

Set to *Enable* (changed from default of *Prompt*). In most environments, this setting can be set to *Enable* for all client workstations.

Initialize and script ActiveX controls not marked as safe

Set to *Enable* (changed from default of *Prompt*). The OCX control IQ uses for images is allowed to both read and write files, and consequently cannot be considered safe in an anonymous access environment. In most environments, this setting can be set to *Enable* for all client workstations.



Scanner software

Scanner software requires no special configuration.

Word Macro Security Settings

Printer configurations are used in IQ to control bin selection for letter printing. Administrators or other users who create printer configurations will need to use the Get Bin Number macro to determine which numbers a specific printer uses to recognize a particular paper tray or bin. This macro will not run properly with Word Macro Security set to High (the default value). In order to run the Get Bin Number macro, this setting will need to be changed to low. This can be restored to the default after the bin numbers are known and the printer configuration has been created and tested.

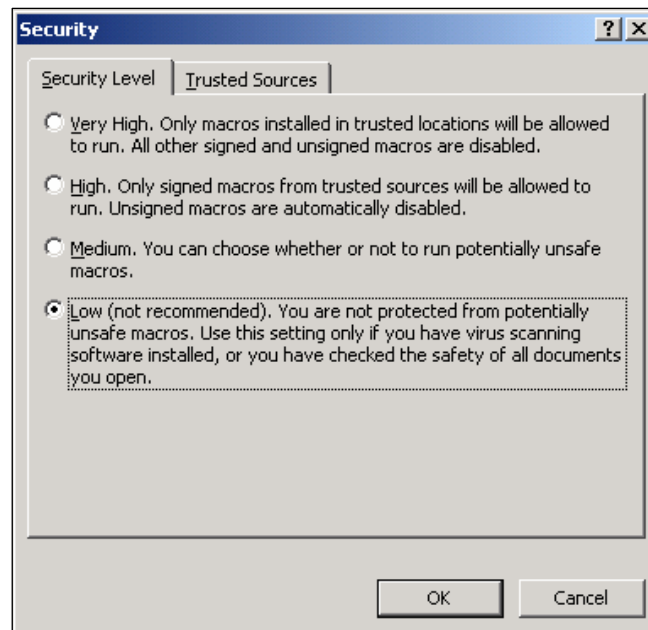


Figure 20 -- Word Macro Security is modified by selecting Security on the Macro submenu of the Tools menu.

Backup Requirements

IQ requires no special backup of client workstations. Workstations backups should conform to the policies currently in place.



Summary

IQ Architecture review

IQ 3.0 uses the .NET Framework and running on a Windows 2003 web server, connecting to an Oracle 10 database.

The “servers” referenced in this document refer to necessary roles in an IQ implementation rather than physical nodes. Server roles include:

- A web server, which must run IIS with Windows 2003. IIS[®] should be configured to run SMTP Server and have a connection to the Oracle database;
- An Oracle database server, running Oracle 10.

Clients must run a Windows operating system, Internet Explorer 6.0 or higher and Word 2003.

For More Information

More information on specific requirements, please contact Dottie Sempsey or Walter Hocketstaller at 703-206-0030.